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Valentina Ivanović *

* Central Bank of Montenegro

E-mail: valentina.ivanovic@cbcg.me

Financial Independence of Central Bank through the Balance Sheet Prism

Abstract: The main reason for central bank independence lies in the fact that it is necessary to clearly distinguish spending money from the ability of making money. Independence of central banks is now a characteristic of almost all developed and highly industrialized countries. In this respect, it represents an essential part of the overall economic reality of these countries. Over the past decade or somewhat earlier, the issue of importance of central bank independence has been raised in developing countries, making the institutional, functional, personal and financial independence of central banks current topics for consideration. The key reason for the growing attention to financial independence of central banks is due to the effects of the global financial crisis on their balance sheets and therefore the challenges related to achieving the basic goals of the functioning of central banks - financial stability and price stability.

Financial strength and independence of central banks must be developed relative to the policy and tasks that are carried out and risks they face in carrying out of these tasks. Financial independence represents a key base for credibility of a central bank. On one hand, the degree of credibility is associated with the ability of central banks to carry out their tasks without external financial assistance. In order to enhance the credibility of central bank in this regard, it must have sufficient financial strength to absorb potential losses and that power must be continuously strengthened by increasing capital and rearranging profit allocation arrangements. This is particularly important in times of crisis.

Key words: central bank, financial independence, independence indices, financial crisis, balance sheet, capital, profit allocation, budget management.

Jel classification: E52 and E58.

1. Introductory Notes

The issue of central bank independence has become one of the main concepts in monetary theory and practice. There are a number of papers dealing with various forms of independence, in particular functional and institutional independence. Fewer papers are dedicated to financial independence and its aspects. The global financial crisis has further deepened this issue, especially in the context of an expanded role of central banks and their balance sheets in the implementation of non-standard monetary policy operations in order to provide conditions for overcoming the crisis and create conditions for faster recovery.

The financial independence of central bank or its financial strength means the ability of central bank to meet all its goals with its own resources, and independent decision-making on measures that will be applied and the instruments to be used for their implementation. This text aims to point to the main aspects of financial independence of central banks, indices used to measure its independence, the importance of the composition and volumes of central banks` balance sheets and their impact on ensuring monetary and financial stability, as well as evaluating the credibility of central bank and thus its independence through a discussion of the issues of capital, profit allocation arrangements, and central bank budget management.

2. Financial Independence of Central Banks

Although economic and legal debates on central bank independence reached their pinnacle in 1990s, this topic is still on the agenda of many discussions, not only in professional and academic, but also in layman circles. This can be explained by the fact that most countries, though not all, support the independence of their own central bank. During the past decade, Western Balkan countries altered their legislation regulating the central bank position. Owing to that, these central banks have grown into institutions with a high degree of legal autonomy. Such a commitment resulted from the prevailing attitude to comply with the relevant European legislation in regulating the central bank status. Thus, all Western Balkan countries are committed to the adoption of legislation that contains explicit provisions on the independent status of the central bank and/or its incorporation into the most important legal acts in the respective countries.

It is often stressed that the most common ways to express and measure central bank independence are related to the level of independence as stipulated in the relevant state legislation. However, the actual independence can largely differ

from the legal independence, especially in developing countries. Legal independence of most central banks in the world grew during the 1990s due to the fact that the central bank laws have been innovated significantly over the past twenty years. The same trend was followed by countries of the Balkan region and Southeast Europe as a whole, as well as in countries of the former Soviet Union. But whether this legal independence contributed to the strengthening of the actual independence of central banks? This is an issue that a lot of theorists debate about, but maybe the best and most accurate answer to it can be found in the very practical implementation of activities and tasks of central banks. In fact, the actual independence of central banks does not depend only on their legal status, but on many formal and informal institutional (and non-institutional) arrangements such as the ability of central banks to effectively engage in the implementation of open market operations, implementation of inflation targeting methodology, exchange rate management, various measures affecting the price stability and the like.

As pointed out by Cukierman (2007), levels of both legal and actual independence of central banks have experienced sustained growth in the world during the 1990s and are generated by the combination of global and regional factors. Two major global factors have increased the need for price stability and globalization through the expansion of international trade flows and giving up on the control of financial and capital flows. Regional factors relate to: disintegration of some institutions (the European Monetary System and the Bretton Woods System) which intensified the need for strengthening some alternative institutions; good results achieved by some central banks (e.g. Deutche Bundesbank) have shown that independence can also act as a good indicator of nominal stability; as a prerequisite for membership in the European Economic Community, many states had to strengthen independence of their central banks; increasing independence of central banks seemed like a good institutional arrangement to reduce inflationary trends (especially in Latin American countries); in transitional economies, the strengthening of central bank independence was a part of an attempt to create the institutional framework necessary for a functioning market economy.

To assess the status and independence of central bank is particularly important for understanding the definition of objectives for which realization central bank is responsible, what is its freedom in the choice of instruments for the realization of goals and implementation of strategies for their achievement.

In theoretical considerations, and we could also say in practice, four different aspects of central bank independence could be defined:

- *Functional* - relating to the freedom to choose monetary policy target;
- *Institutional* - or freedom of choice of monetary policy instruments - definition and implementation;
- *Personal* - which defines the role, status and composition of the highest central bank authority, and
- *Financial* – to summarize, this implies budget independence and prohibition of monetary financing.

Together with the institutional, functional and organizational independence, central bank financial independence makes a cornerstone of central bank independence. With extending a debate on financial management of central banks, particularly in times of adverse economic trends or financial crisis, more attention is focused on the issue of financial independence of a central bank. The governance concept not only signifies the process of making and implementing decisions, but also supporting institutional structures that affects the processes and shapes the way in which central banks conduct their activities. Also, governance defines the relationship between various stakeholders such as government, parliament and central bank itself. Arrangements that include managing central banks' financial matters are a key element in determining the characteristics of central bank in terms of its independence.

As Mboweni states, the power of spending money should somehow be separated from the power of making money (2000). This would be probably the key premise in determining the attitude towards the independence of monetary authorities, while the key indicator for assessing the degree of formal independence would be the so-called financial independence. Financial independence involves two aspects - financial independence in a broad and a narrow sense. Financial independence in the narrow sense implies that a central bank has its own resources established under the annual financial plan, that the law regulates the issue of allocation of profit and coverage of potential loss in a clear and transparent manner. In addition to the abovementioned, financial independence in the broad sense includes also the prohibition of direct central bank lending to the government.

Although central banks have functional, institutional and personal independence, their overall independence will be jeopardized unless if they are not able to generate sufficient financial resources to exercise their functions. According to the Statute of the European System of Central Banks (ESCB), the Member States must not allow their central banks to bring themselves in the situation of not having sufficient financial resources to carry out their tasks related to the ESCB. The concept of financial independence should be viewed in terms of whether any third party is able to influence, either directly or indirectly, not only the functions

of central bank but also its ability to generate sufficient financial resources to exercise its functions. As pointed by Bini Smaghi (2007), there are four essential aspects of financial independence of central banks:

1. **Right to determine the budget and autonomy in the preparation and adoption of the financial plan** - if external entities have the power to determine or influence the budget of a central bank, then this is contrary to financial independence, unless the law contains provisions to protect the effects of such power to execute the basic central bank tasks, in accordance with the tasks of the ESCB;
2. **Implementation of specific accounting rules** - financial statements should be adopted by the highest central bank authority in cooperation with independent external auditors, and may be subject to subsequent approval by third parties (shareholders or the government). The highest authorities of the central bank should individually, independently and professionally decide on the allocation of the central bank's profit. In cases where the central bank functioning is controlled by the supreme audit institution or a similar authority in charge of controlling public finances, the scope of the control should be clearly defined and limited in the law;
3. **Clear provisions regarding the allocation of profits and capital** - law should prescribe the manner of profit allocation. If there are no such provisions, allocation of profit should be taken over by the highest authorities of a central bank on a professional basis and should not be subject to discretion of third parties, unless there is a clear protective clause that such allocation would not be detrimental to the financial resources necessary to perform the central bank tasks. The ESCB Member States are not allowed to reduce capital of their central banks without a prior agreement with their highest authorities. Generally, central banks must be free in taking financial decisions in order to preserve the real value of their capital and assets; and
4. **Financial liabilities for supervisory authorities** - in some Member States, banking supervision is the central bank's function. When such decisions are made by an independent central bank, then it is not a problem. On the other hand, when legal decisions are made by a separate authority responsible for supervision, it is important to ensure that such decisions do not jeopardize finances of central bank as a whole. In such cases, national legislation should ensure that the central bank has ultimate control over any decision that could affect particularly its financial independence.

The independence indices represent a **measure of central bank independence**, which are still used for the analysis of central bank independence as well as in-

flation, economic growth and other macroeconomic variables. Central bank independence is measured by the following indicators: the length of the term of office of central bank's governor and the dependence of the term of office on the government change; the number of members of the highest bank's body who are not bank employees; what happens in case of disagreement between the central bank and the government; the central bank budget (who defines it); instruments available to the central bank; central bank reporting (to whom it submits reports and how), its responsibility, the degree of cooperation with the government, and the like.

Cukierman, Webb and Neyapti (2002) distinguish three indices of central bank independence:

- Index of legislative independence, where they conclude that the legislative measure of independence is an important determinant of low inflation in developed countries, but not in developing countries,
- Index of the change of central bank's governor rate, where they conclude that the change of central bank's governor rate is strongly associated with low inflation in developing countries,
- Index which is calculated on the basis of the responses to the questionnaire.

Pisha (2011) specifically calculates the finance and budget index, which is an integral part of the euro area index, which measures and evaluates the independence of central banks in eight countries of South-Eastern Europe. The definition of the European Central Bank (ECB) of financial independence of national central banks (NCBs) applies to fiscal independence, including the prohibition of monetary financing. Government pressures on central banks are always present especially in times of fiscal and financial crisis. If the law allows the central bank to fund the government, it leads to a debt monetization and inflationary pressures tightening. Due to this, it is important to prescribe statutory prohibition on borrowing to the government by the central bank. It strengthens independence of the central bank and contributes to price stability. The methodology used to measure the index of financial independence focuses on two main fields, namely: limits on lending to the government and budget index. Within the limits of lending, there are two sub-criteria – the prohibition of direct and indirect lending, while the budget index part has five criteria, namely: ownership over the budget or capital; budget-financial plan management; profit allocation; the rest of the profit for the reserves of central bank and coverage for potential losses (Table 1).

Table 1: Methodology for Financial and Budgetary CBI – euro area index

Financial and budgetary independence criteria and respective alternatives	Proposed valuation in points	Proposed weight
I. Prohibitions/limitations of direct credit to Government		40%
1. Overdrafts or any other type of credit facility with the ECB, or with the NCBs in favour of Community institutions or bodies, central government, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the ECB, or NCBs of debt instruments.	1.00	
2. Direct credit is prohibited, except under certain conditions	0.50	
3. There are no provisions on direct credit to government	0.00	
II. Government indirect credit limitations		10%
1. Indirect credit to government is prohibited	1.00	
2. There are no provisions on indirect credit to government	0.50	
3. Purchases of government securities in secondary market are permitted.	0.00	
III. Ownership of budget & capital		10%
1. Full capital is in NCB ownership	1.00	
2. NCB capital held exclusively by state	0.50	
3. NCB capital is shareholders private property	0.00	
IV. NCB budget management		10%
1. NCB budget management is determined by Board or Supervisory Council of the bank	1.00	
2. NCB budget is approved by parliament	0.50	
3. NCB annual budget is approved by Governing Council	0.00	
V. NCB's profit allocation		10%
1. The higher NCB profit allocated to general reserves, - the higher NCB's budgetary independence is:		
from 11% -14% profit allocations in reserves	0.10	
from 15% -20% profit allocations in reserves	0.20	
from 21% -24% profit allocations in reserves	0.20	
from 25% -30% profit allocations in reserves	0.30	
from 31% -34% profit allocations in reserves	0.30	
from 35% -40% profit allocations in reserves	0.40	
VI. NCB's residual profit allocations		10%
1. The higher NCB residual profits is paid to state budget, - the lower NCB's budgetary independence is:		
from 11% -14% residual profits is paid to state budget	0.90	
from 15% -20% residual profits is paid to state budget	0.80	
from 21% -24% residual profits is paid to state budget	0.80	
from 25% -30% residual profits is paid to state budget	0.70	
from 31% -34% residual profits is paid to state budget	0.70	
.....and so on	.....	
VII. Potential NCB loss coverage		10%
1. NCB losses covered by general reserves, special reserves, or by revaluation account, and the like	1.00	
2. NCB losses covered by general reserves, special reserves, and the rest from state budget	0.66	
3. NCB losses covered by general reserves, and the rest from state budget	0.33	
4. NCB losses covered only from the state budget	0.00	

Table 2: Financial and Budgetary CBI –"Eurozone Indices" in SEE countries

SEE CBs ranked by the level of Financial and Budgetary Independence	
ECB	1.00
FYROM-Macedonia	0.80
Bosnia Herzegovina	0.80
Croatia	0.80
Bulgaria	0.70
Romania	0.70
Montenegro	0.50
Albania	0.40
Serbia	0.40

Source: Index calculations are based on "Eurozone Indices" (A.Pisha 2009) and on central bank independence legislation till 2006 following Sandra Dvorsky CBI in SEE with a view to EU Integration- FOCUS 1/07.

Note: Table 8 contains the results of calculations of Financial & Budgetary independence for SEE countries, based on Eurozone Indices (A.Pisha 2009).

As stated in the source for calculating the financial independence index, the legislation as of 2006 was taken as the basis for its determination. It regulates certain independence-relevant issues. As previously stated, legal framework that regulates the status and operations of central banks, in particular in the countries that are taken as the sample for this study, has significantly improved over the past few years. In particular, the Central Bank of Montenegro Law (2010) clearly defines the issues related to financial independence such as: the prohibition of direct and indirect funding of the state; ownership over the core capital – core capital is state-owned; financial resources management through independence in adoption of financial plan and budget management; allocation of 50% of profit to general reserves - 50% to the government budget; covering contingent losses - from general reserves, while potential shortfalls would be covered from the state budget. By including revaluation of these indicators on the 2010 legal basis to show it on the ranking list of central banks in this study, the Central Bank of Montenegro would certainly take some of the top places on the list due to the fact that the law amendments were done in accordance with best practices and standards of the ESCB and the ECB legislation. Of course, there is still a room for improvements and raising the level of financial independence through possible change of capital ownership, higher allocations of profit to general reserves, and reducing the percentage of allocation to the government budget, and the like. In any case, subsequent amendments to the law regulating the work of the Central Bank of Montenegro will further harmonize these solutions with the

ECB standards, thus enhancing the financial strength and independence of the Central Bank.

Financial and budgetary independence of central bank has a high degree of correlation. According to the European Central Bank, "... the ex-ante impact of foreign bodies and authorities on national central banks are considered as threatening for the independence of the ex-post comments on the financial statements and may be seen as a reflection of the responsibility." The difference is also defined between the goals of independence and instruments to achieve independence (Koshie Crace, 2013). There is a wide consensus that the objectives of central banks should be set in consultation with the government. Objectives may relate only to inflation targeting, or to be multiple, and that in addition to inflation control they include financial stability and growth. Independence in the use of instruments means that central bank is free to apply the appropriate types of instruments to achieve the goals in the time that it determines as right for their use.

As mentioned, a large number of articles in the literature deal with the issues of independence of central banks, but the number of those who treat the question of their financial independence is limited. This does not mean that financial independence is irrelevant; on the contrary, it often has a starring role in the statutory laws of central banks. Stella (2002) believes that a financially independent central bank or an equally financially strong central bank is one that has sufficient resources to achieve its fundamental objectives. Martinez-RESAN (2004) is of the opinion that financially independent central bank is the one that it shows proper structure of the balance sheet and has the capacity to generate enough profit necessary for efficient management of its functions.

The composition of the balance sheet of central bank largely determines its risk profile. The general assumption (in terms of economic stability and growth) is that central banks traditionally have extensive and secure sources of income through surplus of funds secured from their monopoly of money issue (seignorage). This fact explains why central banks are often under political pressure or pressure of the government and why their independence is criticized. On the other hand, in conditions of economic crisis, financial vulnerability of central banks may be expressed and requirements to boost profitability may also increase, in order to achieve greater transfer of financial flows to the state budget through the redistribution of profit. This certainly does not match and additionally disturbs financial independence of central bank. So, in such environment, strong support to the independence is previously provided through additional capitalization of central bank through an increase in its capital, which will be able to serve for off-

setting losses produced by effects of the financial crisis, thus reducing potential negative political criticism of their own business.

Financial vulnerability of a central bank may be real or only apparent. This is primarily affected by the accounting rules applied in a central bank which can significantly affect the calming or worsening of profit volatility. What is certain is that whatever accounting rules and standards are to be applied, accounting should reflect the institution's economy in the correct manner, adjusting accounting standards to the characteristics of central banks to support financial independence to become an attainable goal. For example, the optimal capitalization of central banks could be maintained if the distributable profit did not include all generated income and profit thus strengthening financial position of a central bank. Financial independence also requires a high degree of transparency and accountability.

The financial crisis has changed the initial assumptions and positions related to the financial independence of central banks. Namely, the key aspects of financial independence have changed: sufficient assets and liabilities (right type) for the maintenance of all operations; enough income to cover operational and administrative costs without the need for funding from the state budget; ability to establish and manage their own budgets; ability to absorb losses from operations with foreign currency reserves or credit losses and demands for a clear disclosure which losses are on the account of a central bank and which are on the account of a state. Central bank also disposes and manages foreign exchange reserves of the state, and ultimately of public funds. Due to this, its responsibility is great and, at the same time, closely related to the need of achieving certain return on managed assets and also has great responsibility in terms of profit distribution. These expectations are especially expressed at the times of economic prosperity.

The financial crisis has confirmed the fact that central banks cannot cope with all possible situations on their own and, therefore, there is a possibility of required/additional funds from the state budget in times of financial distress. Because the state is the ultimate guarantor of existence and capitalization of the central bank, it could be said that government has a legitimate interest in central bank finances. The problem arises in setting the boundaries between the "interests and interference." The financial crisis has shifted this boundary for the next few years in favour of increased "interference" of governments in affairs and operations of central banks. Some central banks have specific "own funds" i.e. portfolio from which they generate profit that covers losses. This is probably impractical for many central banks. Income is generated on the basis of assets used to meet the goals – in ideal circumstances, most of expenses are covered from operations

with the local currency. But many central banks generate most of their income from foreign exchange reserve management operations. Current low rates at the international money and capital markets mean that the balance sheets of central banks need to be higher to be able to generate income and cover the negative spread that exists with the domestic rates. Due to these reasons, balance sheets of central banks increased substantially and due to the increase in the volume of assets, risk management also increased. Therefore, governments of the states in which central banks operate have higher potential exposures and want more control over their central banks. Also, the financial crisis and a number of non-standard monetary policy measures resulted in the Eurosystem's balance sheet change: total assets and liabilities increased while the risk increased substantially. This development and growth has set new challenges for monetary policy of the Eurosystem, but it also showed that the balance sheets of central banks represent an important indicator of the overall monetary-financial field, but not only that: they represent an important generator of financial independence of central bank or the opposite to its dependence on the government intervention.

3. Central bank balance sheets vs its financial strength/ independence during the financial crisis

Central bank balance sheets have played a salient role throughout the history in providing monetary and financial stability (Caruana, 2011). To wit, central banks were given the monopoly of banknotes issue, and the role of the lender of last resort. Moreover, during the times of financial distress, only the central bank could be a credible lender of last resort and its ability to create monetary liabilities could be used to provide liquid assets to banks in financial difficulties.

The balance sheet of central banks can be used for explaining different transmission channels (Table 3). Any accumulation of assets implies an increase in corresponding liabilities. In addition, the purchase of domestic assets will directly affect their prices and therefore credit spreads and interest rates. An increase in monetary liabilities will have implications for liquidity of the banking sector in the short run and this may undermine price stability in the medium term. But an increase in long-term liabilities could also crowd out lending to the private sector.

Table 3: Central bank balance sheet

Asset	Liabilities and capital
Net foreign assets	Reserve money
	Currency in circulation
Net domestic assets	*Reserves of commercial banks*
	Non-monetary liabilities
	Central bank securities
	Others
	Equity capital

Taking into account these transmission channels, it is quite clear that large expansions of central bank balance sheets have implications for both the real and financial sectors of the economy. In some historical episodes, central banks did expand their balance sheets to be able to fund excessive fiscal spending, which resulted in inflation growth.

During the financial crises, public and political focus on balance sheets of the central banks has been intensified (Asian financial crisis during 1997/98 and the recent financial crisis). In normal periods of stability and prosperity, such interest is reduced and directed primarily towards the interest rate policy, inflation becomes low and the variability over time in the level of assets and liabilities of central banks declines. The sizeable build-up of assets side of central bank balance sheets also required a comparable balance on the liabilities side, i.e. increase in domestic liabilities. It means the increase in liabilities to domestic banks and other financial institutions, which implies a considerable caution of central banks in structuring domestic liabilities as foreign assets increased due to the potential impacts on monetary and financial stability. Central banks have used many instruments over the past several years – reserve requirements, the issuance of the so-called sterilisation bonds and similar to neutralise liquidity. In that way, central banks bought "unconventional" assets on a large scale. They started with buying short-term assets and progressively moved towards buying long-term papers. The aggregate size of the central bank balance sheets in the advanced economies is nearly 8 trillion U.S. dollars, the equivalent of more than 20% of GDP of these states. As the interest rates were close to zero, large-scale asset purchase programmes became the primary tools in efforts to prevent any renewed financial failures. With short-term interest rates near zero, such policies also sought to provide additional monetary stimulus by lowering the long-term interest rate on government bonds.

This global expansion of central bank balance sheets is unprecedented (Cuarana, 2011). Namely, during global financial crisis, central banks showed commend-

able imagination and skill in using their balance sheets to prevent what could have been an even worse crisis. Surely, this leaves long-term consequences on central bank balance sheets. Such sustained expansion makes central bank balance sheets substantially exposed to market developments, e.g. a fall in the value of foreign assets or a rise in long-term interest rates could reduce the value of its assets while leaving the value of its liabilities intact. At some point, the capital of the central bank could be put at risk, which could in some circumstances raise unwarranted political questions and may even undermine the central bank's credibility. Thus, the crisis directly affected financial instability of central banks.

A country and its government are financially stable and sound if the central bank has the financial strength needed to carry out its functions. The central bank policy should be determined by macroeconomic and financial stability and the bank`s efforts to make profit. However, such expansion of central bank balance sheets caused by the crisis has expanded also to the risk area that include inflation, financial instability, distortions in financial markets, and conflicts with government debt management. Central banks managed recently to increase their balance sheets without losing credibility for price stability. However, this begs a question whether the expansion of the balance sheets in the following period will create inflation pressures. The answer largely depends on the actions that will be taken in the following period by the governments of advanced economies in order to limit the future fiscal deficit in a durable way. Very high level of public debt in many countries raises uncomfortable questions for central banks not only about the creditworthiness but also about the fiscal dominance. Low interest rates and quantitative easing policy have perhaps helped to mitigate the financial crisis effects but the struggle with excessively high public debt and cumulative distortion arising from ultra-low interest rates may require the taking of numerous unpopular measures by the central banks in the forthcoming period. Bringing the central banks` balance sheets back to more normal levels in these economies will, at some point, require the intensive and timely use of tools for draining liquidity. It remains to be seen whether central banks will pass this test and keep inflation low and stable in the period ahead, which will surely, if they succeed, contribute to their independence in maintaining monetary policy. If not, we will have the same situation as it had occurred in the past, which put central banks in the position of involuntary followers of fiscal authorities' requirements.

The next question arising from over increased central bank balance sheets refers to a potential threat to financial stability, i.e. whether there are any implications for financial stability from the choice of tools to limit the expansion of bank credit? Some central banks have relied on reserve requirements and such measures were interpreted as a tax on domestic banks. In addition, there is a

question of whether the central bank could affect financial stability by issuing long-term securities? Mehrotra (2012) notes that Asian central banks have relied heavily on central bank paper to sterilise the build-up of foreign reserve assets. The advantage of issuing higher-yielding, longer-term debt is that it makes sterilisation more effective, while the disadvantage is that increased bank holdings of such paper may tend to crowd out bank loans to the private sector. Some call such paper "lazy" assets because it gives banks a yield without much effort. Moreover, large holdings of these relatively low-yielding, liquid, securities by banks tend to depress retail deposit rates, and in medium-term they may influence bank behaviour which can be unpredictable for policymakers and thus disturb overall financial stability.

In addition to the aforesaid, excessive increase of central bank balance sheets in crisis period may have adverse effects on the capital market functioning (decline in yields) and potential spillover effect on other markets (expansion of gap between markets, increased sensitivity of investors, and the like). Moreover, large growth of financial assets in balance sheet influences the management of corresponding liabilities and it may create the conflict between central bank policy and debt management policy by the government, particularly in period when central bank reaches a decision to sell long-term debt securities while public debt managers want a new issue to raise new funds for debt financing. Strong coordination between the government and the central bank is needed to harmonise actions of fiscal and monetary authorities.

How to assess the impact of increased financial risk arising from measures taken during the crisis on central banks' capital is a question raised by Nagel (2012). Assets purchased by central banks during crisis create transfer of risk from private to public sector. All losses would be socialised. As opposed to private companies, central bank cannot be illiquid and technically insolvent. Central bank may always hold assets to maturity and be exposed to credit risk instead of exposure to interest rate and liquidity risks. Central bank losses may not be automatically covered by owners but they surely may incur damage to central bank reputation since the capital is a sign of their political independence, reputation and credibility in the implementation of monetary policy. Whenever it occurs that central bank reports losses, public raises attention concerning confidentiality and ability of the central bank to achieve primary objective of monetary policy i.e. maintaining price stability.

It can be concluded that the responses of central banks to financial crisis include change in the structure of their assets and liabilities to prevent collapse of asset prices, and facilitate conditions for funding financial institutions and private and

public sectors. It tends to reduce risks in the financial system and across private sector by transferring a portion of risks in its balance sheet to facilitate financial conditions and improve functioning of the financial system. As a result, the central bank balance sheets are expanding and a significant increase of banks' reserves in the central bank balance sheet is the result of such expansion. Although price stability has not been threatened yet by large increase in central bank balance sheets, there is a serious risk that additional inflationary pressures will be created in a long run. Consequently, central banks across the world are facing with tasks of further decline of support in economic recovery stages, while simultaneously they have to maintain price stability. Their balance sheets will, owing to such actions, return again into normal courses. However, it is expected that their size will remain larger for some time than it was the case in the pre-crisis period, since the financial institutions want to maintain strong liquidity position. Surely, central bank balance sheets will be reduced through the sale of assets and facilitate their liquidity management to support targeted inflation.

Stella (2005) discusses why the issue of financial strength of the central bank has been relatively neglected and further answers that the historical reason is connected with the fact that most of central banks were highly profitable in longer period. During economic and especially during financial crises, central bank profitability has been disputed, which simultaneously disrupts its financial, institutional and personal independence. In such conditions, independent creation and management of the budget, capital restoration, recapitalization, i.e. adequately resolved issue of profit distribution i.e. loss coverage, become crucially important issues for financial independence of central bank.

4. Capital, profit allocation arrangements and budget management in the function of strengthening central bank independence

A credible central bank needs to have available mechanisms in order to ensure sufficient capital, and/or reserves to carry out its tasks, as needed. Any profit that exceeds the central bank requirements needed to maintain a stable and secure financial strength should be transferred to the state because the accumulation of any excess profit would be irrational.

Central bank institutional aspect includes central bank capital, profit allocation rules and their influence on the bank's independence. These issues have many similarities with relevant issues in private corporations, since both central banks and private companies are formally established with a similar structure and use similar accounting principles. However, similarities from the formal aspect are

covered by several important differences. Unlike private corporations, central banks are established to achieve the overall policy objectives and not to increase profits. Also, unlike private corporations, the negative net worth (or insufficient capital) in the central bank does not imply that the bank will go into bankruptcy and cease to operate. Finally, the owner of the central bank is the state, which implies that any profit allocation increases the state purchasing power, until eventually all losses of the central bank are converted into lost revenues or additional expenses for the central government.

There are numerous important factors when determining the amount of capital of a central bank. These include economic environment in which the central bank operates, historical heritage reflected in the balance sheet in a certain period of time, and status of institutional relations with the government. Targets for determining the level of capital of a central bank differ from one country to another. In some countries, this is the absolute level of capital (Bank of Canada, Central Bank of Montenegro), in others this is the percentage in relation to other positions of the balance sheet (Bank of Japan, Bulgarian National Bank), some determine the level of capital in relation to macroeconomic variables (FED, Central Bank of Iceland, Bank of Estonia) while others determine the base for establishing the level of capital based on the observed solvency risks of banks. The ECB applies a hybrid system which implies the establishment of a nominal level of capital with an option that requires future transfers from the Member States.

Amtenbrink (2005) points out that from the point of view of securing the independence of the central bank, a lack of legal requirements for an initial authorised capital bears the risks that the central bank becomes directly dependent on the financial support of the government, in situations where its profits and/or general reserve are not sufficient to cover losses.

When the level of the central bank capital becomes negative and drops below a certain threshold, the political establishment might prevent the central bank from following policies that lead to further losses, thereby limiting the independence of the bank through its balance sheet position. In such cases, the more capital a central bank possesses, the better its ability to conduct policy independently from fiscal authorities. This consideration becomes especially important when the public interest requires the central bank to adopt measures and policies that create further losses for the bank. For example, achieving an inflation target requires contractionary policy; financial stability factors may require the bank to assume the losses of unsuccessful financial institutions in order to reduce the risk of a systemic crisis; or the central bank may be forced to perform expensive interventions for the purpose of defence of the exchange rate and the like. The

point is not that negative or low capital always limits the bank's policy options. The Central Bank of Chile managed to stabilise inflation despite having negative capital because the government was committed to maintaining a budgetary surplus (Stella, 2005). Canada represents an example of a central bank with a very strong balance sheet that has a minimum capital of CAD 5 million. General reserves were accumulated from the net profits until they reached the prescribed maximum of CAD 25 million. Of total assets of the bank which amounts to CAD 43 billion, 95% belongs to issued or guaranteed bonds by the State of Canada. As for liabilities, 94% goes to money in circulation. Under these circumstances, it is clear that the Bank of Canada records a safe profit and in this respect it is irrelevant whether its capital amounts to CAD 30 million or zero. However, many other cases show that negative capital of a central bank seriously limits its independence.

The point here is that the nominal level of central bank capital actually represents a statistical data without a special meaning unless it has a role in ensuring the objectives of a central bank (price or exchange rate stability) and represents a threshold for determining the central bank net worth or its financial strength. The lack of capital would mean that the financial strength of a central bank does not provide a sufficient condition for achieving its objectives. The capital merely provides a floor below which the central bank cannot achieve its objectives without relying on the state treasury. Therefore, it is necessary to determine the bank's objectives, then to determine the minimum strength of the balance sheet to achieve those objectives, the exposure to risks that the bank is likely to experience, and finally the mechanism that ensures that enough reserves are available to absorb the risk.

Bearing in mind the aforementioned, the question is whether the government still has to cover the lacking capital and all losses of a central bank in order to ensure central bank independence? The answer is not clear-cut, since such arrangement would allow a nonelected institution (the central bank) to make fiscal policy decisions. This creates a trade-off between losses and independence and it may become particularly important when the occurrence of large economic or political shocks force the central bank to engage in policies that have substantially adverse fiscal implications. When endowed with sufficient legal independence and positive levels of capital, most central banks will probably be able to engage in loss-creating policies as required. In contrast, if the bank has a substantial amount of negative capital at the time those policies are needed, the political establishment will probably have the ability, and often the incentive to stop, delay, or severely limit their implementation. This risk is important mainly in developing countries where the association between actual and legal independence is

loose. In such cases, the relation between central bank independence and the level of central bank capital is likely to be discontinuous, in the sense that below a certain threshold of negative capital, the central bank will be seriously limited by political authorities even if it enjoys a high level of legal independence. Above this threshold, the bank's ability to conduct policy independently will not depend on the level of central bank capital. However, maintenance of a sufficiently high level of capital basically provides (partial) insurance against states of nature in which the bank's ability to resist the pressures of political authorities is weakened.

Similar considerations to those in relation to the level of capital that ensures financial strengths, i.e. financial independence of a central bank apply to the rules and regulations for the allocation of central bank profits in relation to state. Namely, the possibility to create buffers, i.e. reserves that would serve to cover potential unrealised losses depends on the defined profit distribution policy.

A very important issue is how to allocate gained profit in achieving central bank owner's rights on the pertaining part of profit and/or dividends, and simultaneously maintaining central bank's financial strength. When a central bank is requested to allocate total profit to the state budget without a possibility to establish general reserves, such central bank becomes directly dependent on the state, i.e. loses its financial power and independence in the case of a loss or financial disorder. Sullivan (2005) points out that policy effectiveness, rather than efficiency of resource utilization or profitability, provides the basis for central bank accountability. In other words, central banks should be assessed in relation to their success in pursuing monetary policy, and not in relation to the recorded profit margin. However, although profit making should not be defined as a central bank's statutory objective, the legal basis must contain clear provisions on how to calculate net profit/loss, and particularly how to allocate/cover them. Clear definition of IAS application in this part is highly desirable. In that sense, the legal basis should unambiguously define that the non-realized gains are deducted from profit and that this amount becomes the allocation basis. To ensure central bank's financial independence, the law must also define the percentage allocated from profit into general reserves. This ensures the coverage of central bank's losses without the obligation to rely on the core capital or state support. Nevertheless, the level of general reserves held by the central bank must be precisely determined. Leaving the issue to the discretion of central bank and government to decide annually on the percentage allocated to general reserves may be problematic for central bank's financial independence, since it may be under state pressure to allocate lower percentage of profit allocated to general reserves than in the case of statutory determined percentage. This percentage is tightly bound to the amount of

core capital or determined as a percentage of total central bank's assets and its total financial liabilities (as in the case of the Central Bank of Montenegro).

In addition to distribution of profits, distribution or coverage of potential losses represents a very important question for financial independence of central banks. In certain legal frameworks for central banks, all possible losses are covered by the state which is acceptable in situations when the overall profit is directed to the state budget (the People's Bank of China). In many examples it is defined that net losses should be covered from general reserves that are established for this purpose. The legal basis must set precise provisions of how and in what manner should the losses be covered, starting from reserve funds and providing recapitalisation when the losses are covered from the capital.

In order to ensure financial independence of a central bank, the central bank budget should not dependent the government general budget, i.e. the central bank must be financed from its own revenues. The annual financial plan of a central bank, which envisages revenues and expenses for that financial year, should not be in control of government, as the latter opens the possibility of political influence on central bank operations (Cf.M. Beblavy, 2003). It may be argued that central bank financial accountability is ensured to the extent that modern central bank laws provide for an internal and/or external review of bank's accounts. In majority of legislation that deal with the central bank operations, monetary policy operations are often explicitly or implicitly excluded from such audits. The statute of ECB envisages that the European Court of Auditors has limited review of the ESCB and ECB in the area of operational efficiency of the management. In this manner, the application of this provision in the legislation of the central banks and state audit authorities, in the EU countries, clearly defines the framework in which the operations and activities of the central banks are subjected to audits by the state audit authorities. This method further enhances the financial strength and independence of the central banks without diminishing their responsibilities for monetary and financial stability.

5. Conclusion

Financial independence is the key element of central bank's full independence. If confidentiality is important for the success of monetary policy, central bank must be financially strong. Practical implication of this premise means that a financially sound central bank should ensure that its strength is sufficient to tackle all challenges and responsibilities in pursuing its policy and accompanying risks.

To be able to pursue its policy independently, a financially sound central bank must have appropriate mechanisms and instruments to be used for attaining set objectives. Legal independence in most of central banks worldwide trended up in the 1990s resulting from sizable amendments to central bank laws during the last twenty years. The South-Eastern Europe countries followed the same trend. This paper answers whether such legal independence contributed also to strengthening the actual central banks' independence, concluding that it does not depend on their legal status only, but on many formal and informal institutional (and non-institutional) arrangements related to budget management, defining the amount of reserves and capital, profit allocation and covering of potential losses issues.

The paper stresses that the assessment of central bank's position and independence particularly requires the manner of defining the objectives under central bank's responsibility, the freedom in selecting instruments for their pursuing and strategies for their accomplishing. The independence indices measure central bank's independence, and they serve to assess central bank's independence and inflation, economic growth, and other macroeconomic variables ratio. The text refers to central bank's independence index survey relative to its budgetary independence, including the prohibition of monetary financing, while methodology used for measuring independence index focuses on two primary fields: prohibitions/limitations of direct credit to government and budget index. The prohibitions/limitations of direct lending to government take into account two subcriteria: direct and indirect credit limitations, while budgetary index includes five criteria: ownership of budget and capital; budget/financial plan management; profit allocation; central bank's residual profit allocations and potential NCB loss coverage. The paper concludes that financial and budgetary independence of central banks are highly correlated.

This paper indicates that the financial crisis altered the initial assumptions and positions referring to central banks' financial independence and that many non-standard monetary policy measures that have been undertaken resulted in amended central banks' balance sheets: total assets and liabilities increased, while the risk substantially rose.

It particularly points that the structure of central bank's balance sheet largely determines its risk profile, and consequently the financial independence, thus the second part of the paper discusses the topic referring to the fact that expansion of central bank's balance sheet during a crisis has implications both to the financial sector and the real economy. It assesses that the public-political focus becomes particularly strong in the financial crisis periods, and that such expan-

sion of central banks' balance sheets has spread the risk possibilities including possible inflation, financial instability, disorders at the financial market and potential conflicts on public debt management.

The third part of the paper implies that, when needed, credible central bank must have available mechanisms to have sufficient capita and/or reserves to execute all its tasks with the remark that central bank's institutional aspect includes central bank's capital, rules for profit allocation and its effect on bank's independence. This part touches the issues of importance and role of capital in central bank's balance sheet and its importance as a buffer in crisis period, as well as a lever used for measuring central bank's financial strength. The treatment of earned profit allocation, and budget drafting and disposing are also instruments used by central banks to ensure and strengthen their own financial strength and/or independence in executing own objectives and tasks.

In general, it may be concluded that central bank, as an institution, cannot solely select the optimal level of its financial strength and analysis. To wit, determining central bank's strength requires a detailed analysis not only of central bank's economic environment and balance sheet, its accounting standards, profit transfer rules and the amount of its capital, but also of the institutional status of central bank in relation to the government. Continuously cooperating with the government and the parliament, and using proper and wise application of instruments and mechanisms they manage, central banks will manage to ensure the attainment of their tasks while preserving their independence in all aspects.

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